

ABSTRACT OF THE DISCLOSURE

1       The method operates a parallel computer system with  
2 distributed memory. Each processor element has a local program  
3 memory, data memory and communications memory. Each processor  
4 element contains a communications manager unit with an address  
5 comparator and an address computation unit with entailed  
6 functionality. All processors globally write the global data and  
7 locally read the global data. A global address is adjoined to  
8 data written globally. For each processor element, an address  
9 comparator determines from the address whether the specific  
10 processor element is interested in these data. If yes, a local  
11 address computer determines the physical address in the processor  
12 memory. The parameters of the address comparator are agreed upon  
13 with the operating system before or during computation. The  
14 invention creates scalable multi-processor systems offering high  
15 communications performance using standard operating systems.